

Work Order ID 59531

Monday, June 07, 2010 10:31:51 AM



Page 1

Item ID: D212-664-101

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Fwd

Start Date: 6/7/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 6/21/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

10-06-07 Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D212-664-141

Rev D

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D212-664-101 CHG003

8060707

110

0.00



Pick Kit

Packaging

Packaging

Memo

0.00

Packaging

(IX)

2

MB 10-06-22

120

0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D212-664-141 using CNC bender program 212-fw and Folio D212-664-101

(IX)

2

MB 10-06-22

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer:

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC15- Crosstube Dimensional Check

0.00

S 10/06/22

QC

Memo

0.00



Quality Control

140

Crosstubes

0.00

Crosstubes

Memo

0.00

1-Drill pilot holes in tube as per Dwg D212-664-141 using drill Jig DT8548 & DT8549, using drill table DT8577, set-up towers in hole #7 as per QSI 10

2-Ream hole to finish size in tube as per Dwg D212-664-141 using drill Jig DT8548 & DT8549. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-141

4-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D212-664-141

MP 10-06-23

- ALM

10-06-23

W/O:		WORK ORDER CHANGES						
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

Crosstubes Chemical Conversion

0.00



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

Chemical Conversion Coat within 24 hours of bending and drilling

1

—

AWM
10.06.23

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8.10.06/23

70

170

Outsource process - NDT per QSI038 4.1

0.00



Outsource2

Memo

0.00

Outsource process - NDT

Liquid Penetrant Inspection as per QSI 038
Issue P/O: 12164
LPI as per ASTM 1417 Level 2
Attach copy of NDT results to work order

CZ

10/6/28

①

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 	Receive & Inspect for Damage & Mat'l Certs Packaging	0.00							
Packaging	Memo	0.00							
Packaging	Ensure copy of NDT results attached to work order.								
190 	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control	Inspect for damage & ensure results are as per Dwg D212-664-141								

PLD/28

MA 10 06 28

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

Spray Painting per QSI005 4.2

0.00



SprayPaint

SprayPaint

Memo

0.00

Spray Painting

1-Prime inside and outside crosstube as per QSI 005 4.2
2-Paint outside crosstube with White Imron as per QSI 005 4.2

PRIME:

Start Time: 10:30Finish Time: 11:30

PAINT:

Start Time: 3:30Finish Time: 4:30MA 10 06 30 0

210

QC14- Inspect Spray Paint

0.00



QC

Memo

0.00

Quality Control

Then, Wrap in plastic bag to protect from scratches

BT 10-07-01

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Cust Item ID:

Required Date: 6/21/2010 Req'd Qty: 1.00

Customer:




Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220  Crosstubes	Crosstubes	0.00							
Crosstubes	Memo 1- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe 2-Install supports with magnobond as per QSI 015 Adhere for for 12 Hrs A/R 6398 Magnobond Batch: <u>114021</u>	0.00							
230  QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo	0.00							
240  Packaging	Pick Kit	0.00							
Packaging	Memo	0.00							

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

260

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D212-664-101

270

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

MF 10-7-8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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NOTE: Date & initial all entries

Picklist Print

Monday, June 07, 2010 10:31:55 AM

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Work Order ID: 59531

Parent Item: D212-664-101

Parent Item Name: Crosstube Fwd

Comments: IPP Rev:E 04.02.16 Reformat KJ/DS
IPP Rev:F 06-03-29 Remove Coments on Pick List JLM
IPP Rev:G 07-04-30 As per Rev C JLM

Start Date: 6/7/2010

Required Date: 6/21/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
D212-664-101TRN		Manufactured	No			110	Each	2.0000	1	1			
Crosstube Turning Detail													

Location Loc Qty Loc Code

LG

2

58655

1

58656

1

D3595-063-450

Manufactured

No

230

Each

33.9790

4

4.210526



RUBBER CUSHION

Location Loc Qty Loc Code

LG

33.97897368

53775

9.97897368

58161

24

MS21920-25

Purchased

No

220

Each

99.0000

4

4



Clamp(per MIL-DTL-8783C)

Location Loc Qty Loc Code

LG

50

114759

50

ST451

49

113281

9

113282

18

113744

1

114141

21

B-59751 MB 10-06-22

M/ 10.07.05

M/ 10.07.05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Monday, June 07, 2010 10:31:55 AM

Page 2 **13**

Work Order ID: 59531

Parent Item: D212-664-101

Parent Item Name: Crosstube Fwd

Comments: IPP Rev:E 04.02.16 Reformat KJ/DS
 IPP Rev:F 06-03-29 Remove Coments on Pick List JLM
 IPP Rev:G 07-04-30 As per Rev C JLM

Start Date: 6/7/2010

Required Date: 6/21/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
D2893-1		Manufactured	No			220	Each	37.0000	2	2			



2.75 Support

Location

Loc Qty

Loc Code

LG

37

53340

2

53774

15

56354

20



Placard

Manufactured No

240 Each

4.0000



60/33

ml 10 07 05

Location

Loc Qty

Loc Code

ST056

4

58754

4



BOLT

Purchased No

240 Each

42.0000



14

ml 10 07 05

Location

Loc Qty

Loc Code

ST343

42

113422

30

114341

12



Bolt

Purchased No

240 Each

50.0000



114341

ml 10 07 05

Location

Loc Qty

Loc Code

ST343

50

114330

50

114330

Monday, June 07, 2010 10:31:55 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
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Comments: IPP Rev:E ☐ 04.02.16 ☐ Reformat ☐ KJ/DS
IPP Rev:F 06-03-29 Remove Coments on Pick List JLM
IPP Rev:G 07-04-30 As per Rev C JLM

Start Date: 6/7/2010

Required Date: 6/21/2010

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
MS21042L6	Purchased		No			240	Each	303.0000	+6	6			
													
Nut													

Location

Loc Qty

Loc Code

ST300

303

111578

103

114495

200

AN960JD616

NAS1149D0663J

Purchased

No

240

Each

0.0000

18

18

Washer

111578

1114988 6/14/11 (1)

Monday, June 07, 2010 10:31:55 AM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

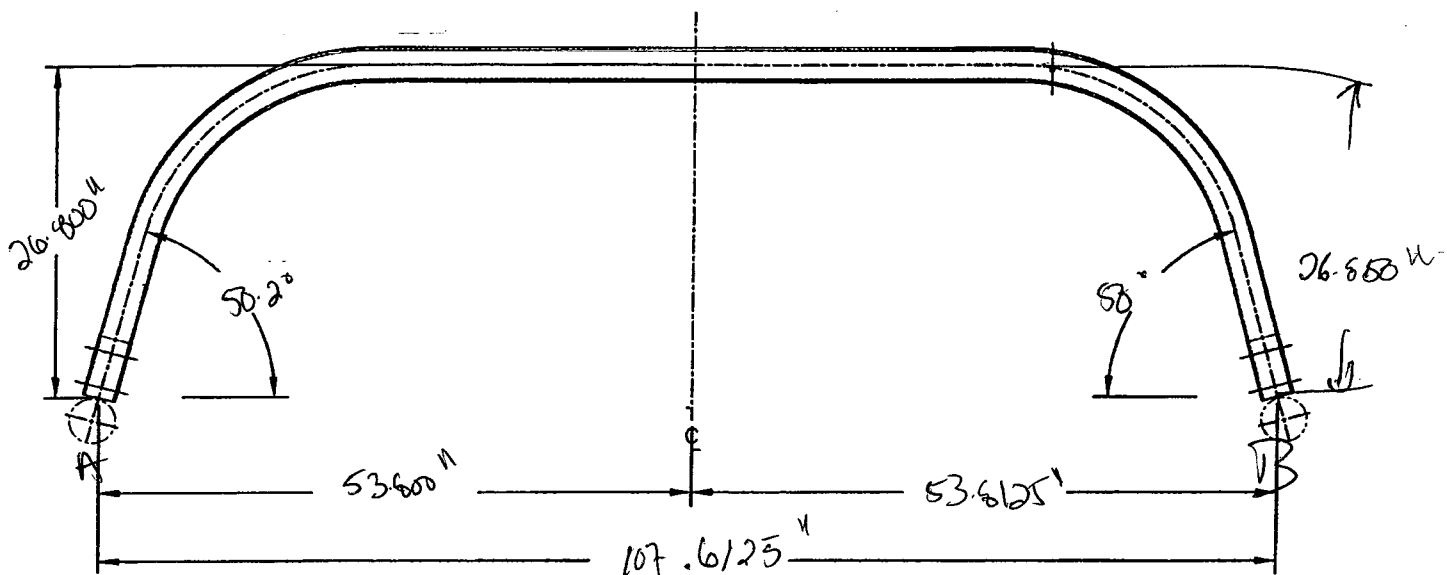
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DART AEROSPACE LTD	Work Order: 59531
Description: Crosstube High Fwd (205/212/412)	Part Number: D212-664-101
Inspection Dwg: D212-664-141 Rev: D	Page 1 of 1

Required Dimension	Min	Max
Height	26.79	27.05
1/2 Span	53.59	53.85
Angle	49	52
Total Span	107.18	107.7



Comments

QC15 Inspection	6
Date	10/06/22

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	07.05.31	Dimensions updated per Dwg Rev C	KJ/JM	
C	10.04.01	Dwg Rev updated	KJ	

W/O:		WORK ORDER CHANGES					
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Item	Qty -141	Qty -141B	Part Number	Description
1	X		D212-664-141	CROSSTUBE ASSEMBLY (205/212/412 HIGH FWD)
2		X	D212-664-141B	CROSSTUBE ASSEMBLY (214 HIGH FWD)
3	1	1	D6005-128	CROSSTUBE
4	2	2	D2893-1	SUPPORT
5	4	4	D3595-063-450	RUBBER CUSHION
6	4	4	MS21920-25	CLAMP (OR MS21920-26)
7	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6005-128
FINISHED LENGTH = 126.514±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS
- 7) WEIGHT: D212-664-141 = 33.6 lbs (PER IIN-D212-664)
D212-664-141B = 33.6 lbs (PER IIN-D212-664)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2893-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2893-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-25 CLAMPS (OR -26) WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2893-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY
RETURNED
ENGINEERING
UNCONTROLLED
SUBJECT TO CHANGE
WITHOUT NOTICE
WORK ORDER
NO. 59531
BS106-07

RELEASED
2009-10-29
M

D	REFORMAT/REVISE GENERAL NOTES/PART LIST; REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; ADD -141B (ZN B4-2, D4-2); REMOVED REF & ADD TOLERANCES (ZN B4-3, C6-3, C8-3 & B6-3); RELOCATED FLAG #6 PER PAR 08-046 (ZN A5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4	RF	09.09.30
C	REMOVE -851 ABRASION STRIP; ADD MAGNOBOND 6398, CUSHION, REVERSE CLAMPS	PH	07.03.08
B	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	PH	05.02.04
A	NEW ISSUE	PH	00.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	PH	DRAWING NO.	REV. D
MFG. APPR.	PH	D212-664-141	SHEET 1 OF 4
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	XTUBE ASS'Y (205/212/412 HI FWD)	NTS
DATE	09.09.30	COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

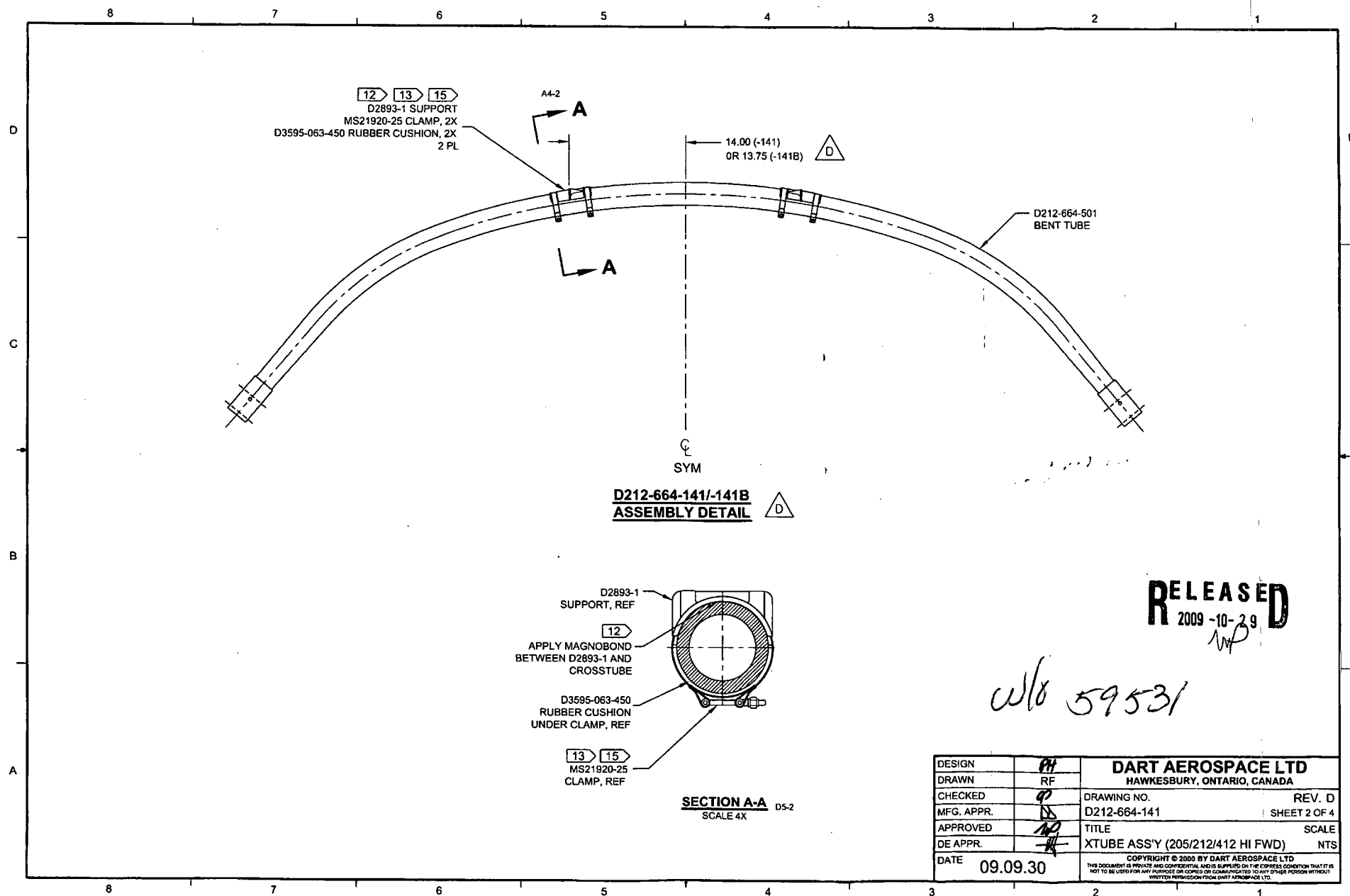
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NOTE: Date & initial all entries



RELEASED
2009-10-29

DESIGN	PH	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	Q	DRAWING NO.	REV. D
MFG. APPR.	DS	D212-664-141	SHEET 2 OF 4
APPROVED	MD	TITLE	SCALE
DE APPR.	HL	XTUBE ASS'Y (205/212/412 HI FWD)	NTS
DATE	09.09.30	COPYRIGHT © 2000 BY DART AEROSPACE LTD	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

D212-664-501
BENDING AND DRILLING DETAIL

10 D

RELEASED
2009-10-29
MP

WLO 59531

VIEW C-C: CUFF DETAIL
SCALE 3X

C2-3

SECTION B-B
SCALE 4X

C4-3

DESIGN	PH	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	Q	DRAWING NO.	REV. D
MFG. APPR.	AS	D212-664-141	SHEET 3 OF 4
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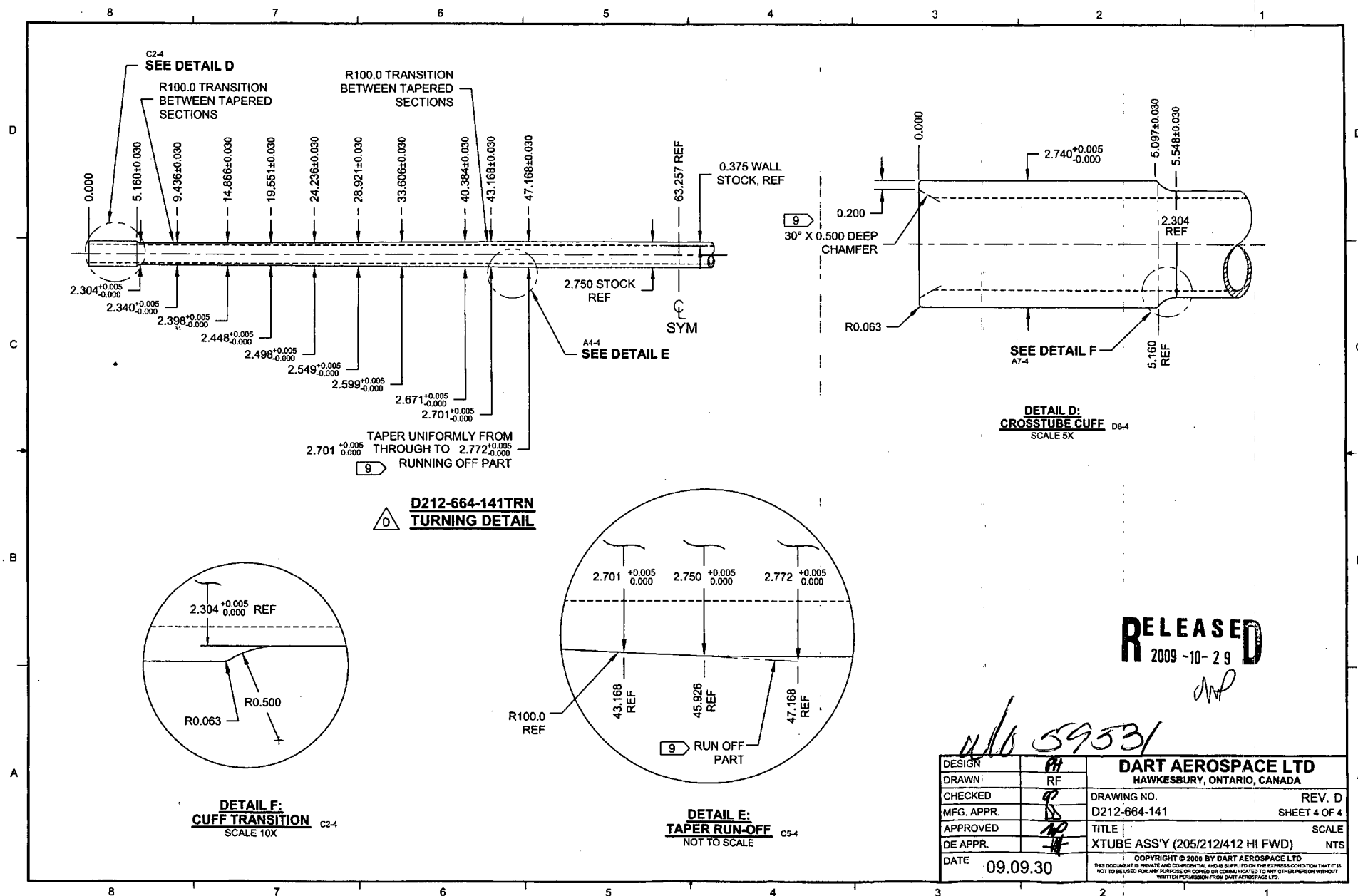
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



LIQUID PENETRANT TEST REPORT

P- 15328

CLIENT	<u>DART Aerospace</u>	DATE	<u>JUNE 24-2010</u>	PAGE	<u>1</u> OF <u>1</u>
ATTENTION	<u>LINDA/CHANTEL</u>	ACUREN JOB NO.	<u>188-10-0771</u>	TIME	AM <input checked="" type="checkbox"/> PM <input type="checkbox"/>
ADDRESS	<u>1270 ABERDEEN, HAWKESBURY ON.</u>	PO/WO NO.	<u>121641</u>	WORK LOCATION	<u>HAWKESBURY - PLANT.</u>
PROJECT	<u>KCA 4K7</u>	ACCEPTANCE STD.	<u>ASTM 1417</u>	REV./DATE	<u>2007</u>
ITEM(S) EXAMINED	<u>F.P.I. ON CROSS TUBES</u>				
	<u>4 PCS</u>				

JOB DESCRIPTION	PROCEDURE NO. <u>LT-0002</u> REV./DATE	TECHNIQUE NO. <u>LT-TECH 2</u> REV./DATE
PART NO.	MATERIAL <u>ALUDINE ALUMINUM</u> THICKNESS <u>VARIOUS</u>	
SCOPE	<u>WET FLOURESCENT LIQUID PENETRANT INSPECTION</u> <u>CARRIED OUT 100% EXTERNAL</u>	

TEST DETAILS	
METHOD <input checked="" type="checkbox"/> FLUORESCENT <input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH <input type="checkbox"/> SOLVENT REMOVABLE <input type="checkbox"/> POST EMULSIFIED
FAMILY BRAND <u>MAGNA FLUX</u>	BLACK LIGHT S/N <u>16459</u> <input type="checkbox"/> OUTPUT > 1000 μ W/cm ² <input type="checkbox"/> AMBIENT < 2 fc
PENETRANT <u>2L 07</u> MINIMUM DWELL TIME <u>45</u> MIN.	LIGHTING EQUIP. <input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT <input type="checkbox"/> OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER <u>H2O</u> MINIMUM DRY TIME <u>>10</u> MIN.	OTHER <u>LABINO</u>
DEVELOPER <u>SKD 52</u> MINIMUM DWELL TIME <u>10</u> MIN.	LIGHT METER S/N <u>1098866</u> CAL DUE DATE <u>OCT 19 2010</u>
DEVELOPER TYPE <input checked="" type="checkbox"/> NON AQUEOUS <input type="checkbox"/> AQUEOUS <input type="checkbox"/> DRY	

TEST SURFACE	
SURFACE CONDITION <input type="checkbox"/> AS GROUND <input type="checkbox"/> AS WELDED <input type="checkbox"/> MACHINED <input type="checkbox"/> SHOT BLASTED <input type="checkbox"/> CLEAN BARE METAL	
SURFACE TEMPERATURE <input type="checkbox"/> < -4°C/ 20°F <input type="checkbox"/> -4°C/ 20°F TO 10°C/50°F <input type="checkbox"/> 10°C/50°F TO 52°C/125°F <input type="checkbox"/> > 52°C/125°F	

RESULTS- <input type="checkbox"/> METRIC <input type="checkbox"/> IMPERIAL	
<u>1 - CROSS TUBE - W.O. 59522 ✓</u>	
<u>1 - CROSS TUBE - W.O. 59523 ✓</u>	
<u>1 - CROSS TUBE - W.O. 59531 ✓</u>	
<u>1 - CROSS TUBE - W.O. 59532 ✓</u>	
<u>2 - ✓</u>	
<u>2 - ✓</u>	
	<u>10 06 28</u>

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES	
CLIENT REPRESENTATIVE <u>Tan Tiley</u>	DTR # <u>E63362</u>
TECHNICIAN (SIGNATURE): <u>[Signature]</u>	REPORT REVIEWED BY:
NAME (PRINT): <u>Mike Johnston</u>	NAME INITIALS
1 st TECHNICIAN CGSB LEVEL <u>2</u> SNT LEVEL <u>6606</u> CGSB REG. NO. <u>6606</u>	2 nd TECHNICIAN CGSB LEVEL <u> </u> SNT LEVEL <u> </u> CGSB REG. NO. <u> </u>

REFERENCE ONLY

5.0 PARTS LIST

5.1 HIGH GEAR CROSSTUBES

Item	-101	-201	-203	Part Number	Description
	X			D212-664-101	CROSSTUBE INSTALLATION, 204/205/210/212/214/412, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH FWD
		X		D212-664-201	CROSSTUBE INSTALLATION, 204/205/210/212/214, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH AFT
			X	D412-664-203	CROSSTUBE INSTALLATION, 412 HIGH AFT
1	1			D212-664-141	CROSSTUBE ASSEMBLY, 204/205/210/212/214/412, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH FWD
2		1		D212-664-241	CROSSTUBE ASSEMBLY, 204/205/210/212/214, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH AFT
3			1	D412-664-243	CROSSTUBE ASSEMBLY, 412 HIGH AFT
10	2			* D2893-1	SUPPORT
11	4			* D3595-063-450	RUBBER CUSHION
12	4			* MS21920-25	CLAMP (OR MS21042-26)
13	4			AN6-35A	BOLT
14	4			AN6-36A	BOLT
15	6			MS21042L6	NUT (OR MS21042-6)
16	18			AN960JD616	WASHER
20		2		* D2940-1	SUPPORT
21		4		* D3595-063-530	RUBBER CUSHION
22		4		* MS21920-28	CLAMP (OR MS21042-30)
23		4		AN6-40A	BOLT
24		2		AN6-41A	BOLT
25		6		MS21042L6	NUT (OR MS21042-6)
26		18		AN960JD616	WASHER
30			1	* D2896-1	SUPPORT
31			2	* D2856-600-1009	ABRASION STRIP
32			2	* D3595-063-570	RUBBER CUSHION
33			4	* MS21920-28	CLAMP
34			2	* MS21920-30	CLAMP (OR MS21042-32)
35			4	AN6-40A	BOLT
36			2	AN6-41A	BOLT
37			6	MS21042L6	NUT (OR MS21042-6)
38			18	AN960JD616	WASHER
39			2	* D3189-1	CHAFING SHIELD
50	1	1		D3428-1	PLACARD

*REFERENCE ONLY. PARTS ARE INCLUDED IN D212-664-141/-241 OR D412-664-243 ASSEMBLIES ABOVE
NOTE: KITS INCLUDE EXTRA HARDWARE FOR COMPATIBILITY WITH BOTH DART AND BELL/AA
SKIDTUBES.

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Revision: F
Date: 08.09.05

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 59531

Monday, June 07, 2010 10:31:51 AM



Page 1

Item ID: D212-664-101

Accept



Setup Start



Revision ID:

Item Name: Crosstube Fwd

Stop



Start Date: 6/7/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 6/21/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date:

10-6-07

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D212-664-141

Rev D

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D212-664-101 CHG003

cy 10/7/7

110

0.00



Pick Kit

Packaging

Packaging

Memo

0.00

Packaging

REFERENCE ONLY

(IX) MB 10-06-22

120

0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D212-664-141 using CNC bender program 212-fw and Folio D212-664-101

(IX) MB 10-06-22